State of the Corridor Report

2012 Report on the Highway 99 and Interstate 5 Corridor System Management Plan

Overview:

Corridor System Management Plans (CSMPs) are comprehensive operations and management plans intended to maintain and enhance corridor mobility through integrated management of all travel modes within the corridor. This includes highways and freeways, parallel and connecting local and regional roadways, public transit (bus, bus rapid transit, light rail, intercity rail) and bikeways. Together these facilities comprise the CSMP managed network and are displayed in Figures 1 & 2. CSMPs have been developed to provide one unified concept for managing, operating, and preserving a corridor for all travel modes and across all jurisdictions resulting in the integration of capital improvements, traffic management, and transit management strategies. Each CSMP includes current management strategies, existing travel conditions and mobility challenges, corridor performance management, proposed management strategies, and needed capital improvements. The Highway 99 (SR 99) and Interstate 5 (I-5) corridor includes SR 99 from the San Joaquin County Line to Highway 50, SR 99 from Interstate 5 (I-5) to SR 20, and I-5 from Hood-Franklin Road to SR 113 (north), as well as select parallel roads, transit services, and bicycle routes.

Purpose of the State of the Corridor Report:

The annual State of the Corridor (SOTC) Reports further the momentum started by the completion of the 2009 CSMPs, and the 2010 and 2011 SOTC Reports by monitoring and reporting annual corridor performance and ongoing implementation of CSMP strategies. The first two SOTC Report editions covered fiscal year activity from July 1st through June 30th. **This 2012 SOTC Report covers July 1, 2011 through December 31, 2011.** Future editions of this report will identify corridor performance and implementation of strategies on a calendar year rather than a fiscal year basis. The reason for this change is to utilize the performance data in the *District 3 Mobility Performance Report* (MPR), which is reported by calendar year rather than fiscal year. The MPR, which is produced by the Division of Maintenance and Traffic Operations, evaluates the operational performance of freeways in the District. The major benefit of this reporting period change will be a SOTC report that contains more accurate and up-to-date reporting of corridor performance and eliminates redundancy.

The 2012 SR 99/I-5 SOTC Report includes the following components:

- Status of the Corridor Mobility Improvement Account Projects
- Major Corridor Accomplishments
- Performance Measures: State Highway System, Transit, and Bicycle
- Moving Forward: CSMP Strategies, Traffic Operations Improvement Strategies, and Micro-simulation Modeling

Figure 1: Sacramento & Yolo SR 99/I-5 CSMP

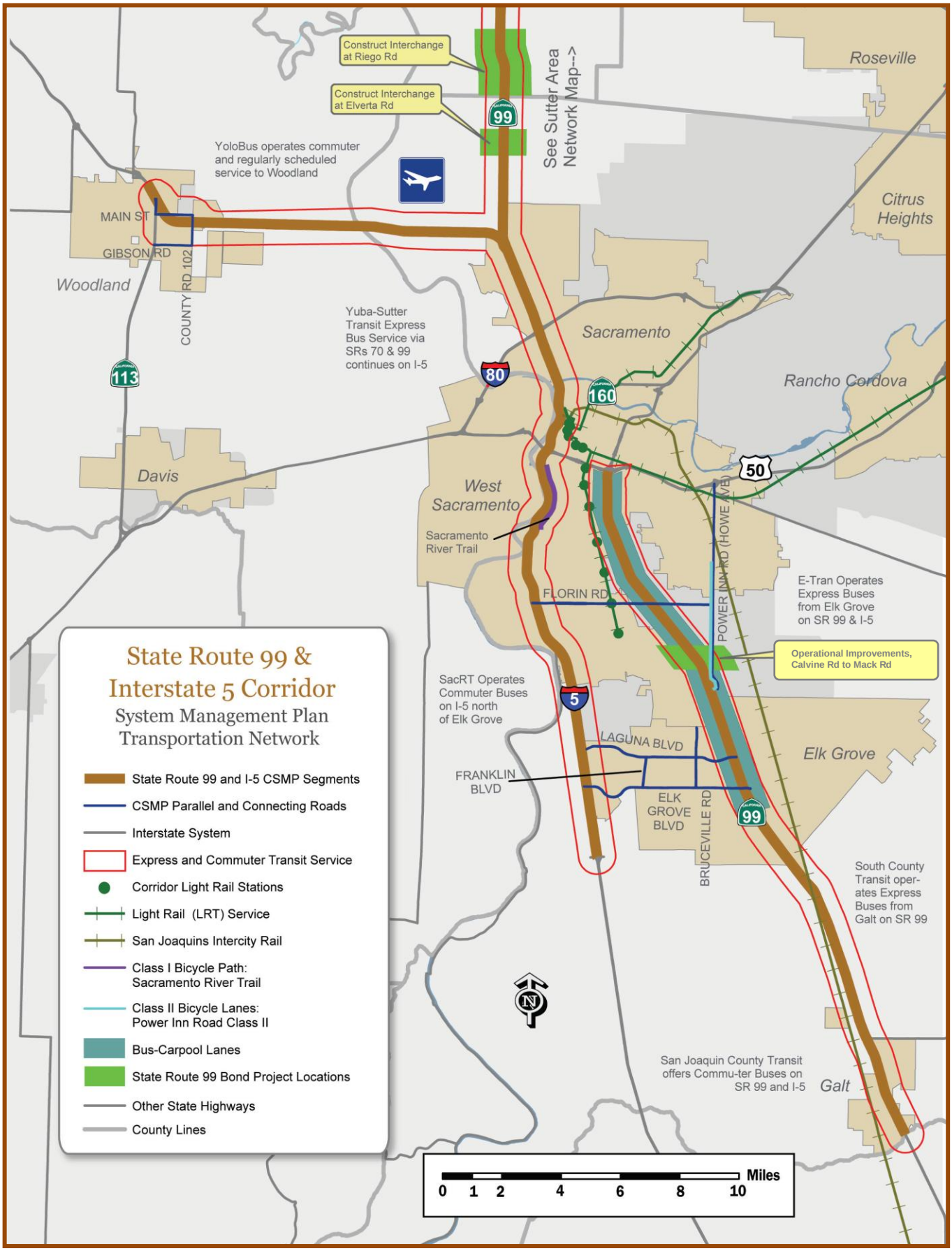
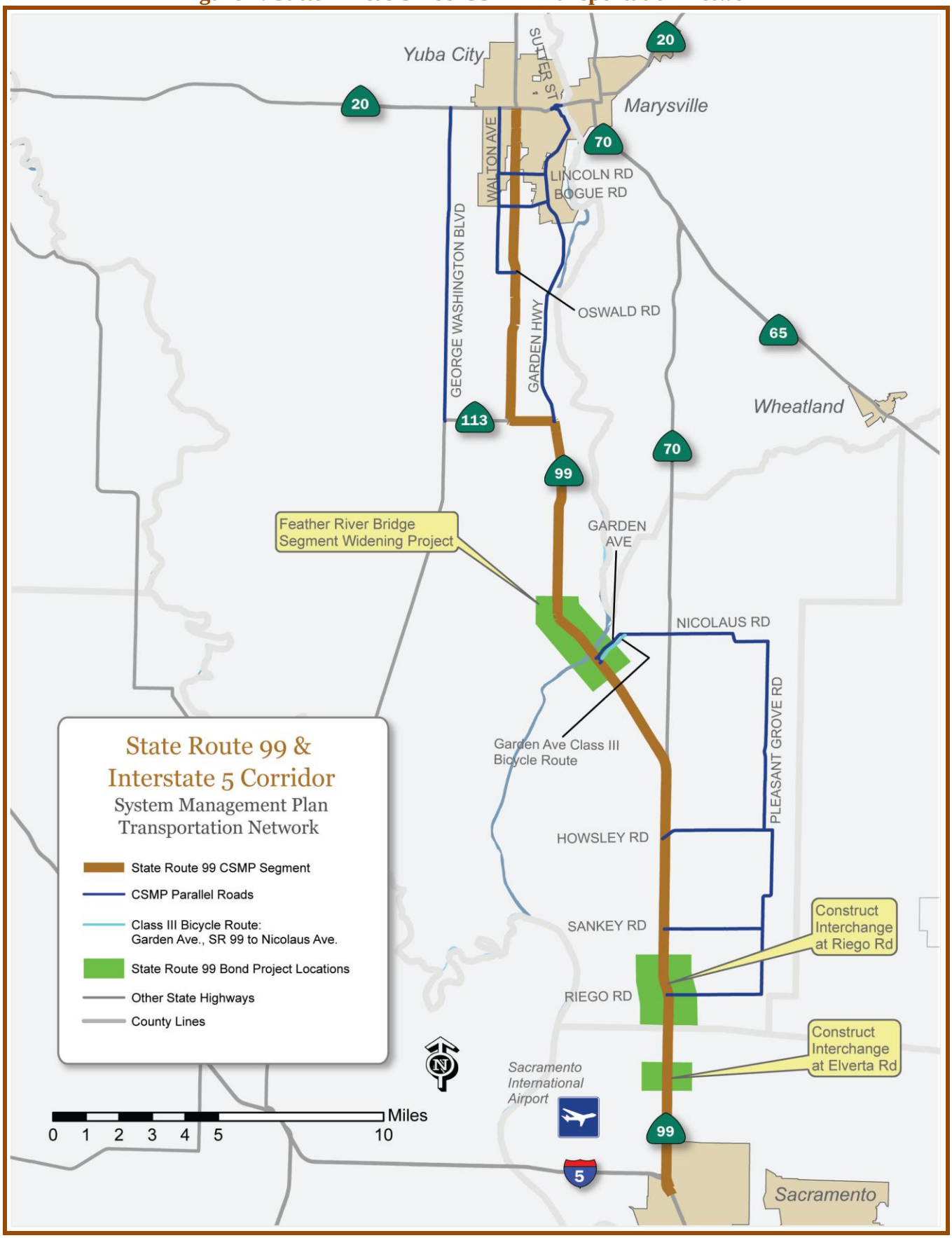


Figure 2: Sutter Areas SR 99 CSMP Transportation Network



SR-99 Bond Program Project Status:

CSMPs were developed for corridors associated with the Corridor Mobility Improvement Account (CMIA) and Highway 99 Bond Programs, supported by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, Proposition 1B. Four projects on Highway 99 in Sacramento and Sutter Counties were awarded Highway 99 Bond Program funds. The status of these projects is as follows:

Highway 99 Auxiliary Lane Project, from Calvine Road to Mack Road: Caltrans began construction for this $57.4 million project in September 2010. Construction was completed and auxiliary lanes were open to the public in late 2011. Adding auxiliary lanes on this congested segment of highway in Sacramento County will provide more weaving and merging space to smooth traffic flow.

Highway 99 Elverta Road Interchange Project: Sacramento County is developing this $34.2 million project to replace the current signalized intersection with the construction of a new interchange, over-crossing structure, and related conforming, pedestrian, and bicycle local roadway changes. This project also includes Sacramento County Measure A Sales Tax funding and developer fees. It is projected that this oversight project will be Ready to List in early 2012, go to construction by the Summer of 2012, and be completed by 2013

Highway 99 Riego Road Interchange Project: Caltrans is developing this $33 million project in Sutter County to replace the current signalized intersection with the construction of a new 8-lane interchange and over-crossing structure. The Right-of-Way certification milestone for this project was completed in June 2011. Funding allocation for this project will be requested from the California Transportation Commission at the January 25, 2012 meeting. If funding is approved, the project should be in construction by the Fall of 2012 and completed by 2014.

Highway 99 Feather River Bridge Replacement Project: Caltrans began construction on this $50.5 million project in Sutter County in 2010. This project will result in Highway 99 being widened from a 2 to 4 lane expressway between Sacramento Avenue and Nicolaus Avenue, and the construction of a new 2- lane, 3,000 foot long bridge across the Feather River. The project is expected to be completed by 2015.

Major Corridor Accomplishments:

Highway 99 Auxiliary Lane Project, from Calvine Road to Mack Road: Caltrans began construction for this $57.4 million project in September 2010. Construction was completed and auxiliary lanes were open to the public in late 2011. Adding auxiliary lanes on this congested segment of highway in Sacramento County will provide more weaving and merging space to smooth traffic flow.

Installation of Traffic Management System (TMS) Units: Caltrans completed the installation of additional TMS units in 2011 along SR 99 south of SR 104 in Galt, north of Sheldon Road in Elk Grove, and north of Elkhorn Boulevard (Bl.), as well as along I-5 north of Laguna Bl., south of Sutterville Road, north of Garden Highway, north of Arena Bl., and south of Del Paso Bl..

Performance Measures:

A diverse mixture of transportation modes and roadways such as state highways, major arterial roadways, transit services and bicycle facilities, make up the managed network and combine to provide mobility in the CSMP corridor. Continuous monitoring of the network through the use of performance measures is an integral part of corridor management and investment decision making by aiding in the identification of immediate, efficient, and effective system operational strategies and capital improvements.

State Highway System Performance Measures:

The District MPR is now being used to track and report on highway performance in each CSMP corridor. This will ensure data and reporting consistency in the most efficient manner possible. It is anticipated that the SR 99/I-5 CSMP will be revised during the next two fiscal years and that the performance measures will be further refined.

Traffic Congestion:

- **Vehicle Hours of Delay (VHD):** Total VHD at 60 miles per hour in both directions decreased in 2011 over 2010 in all Counties, except for Sacramento and Yolo Counties where it increased on I-5. The decrease in Sacramento County on SR 99 may be attributed to completion of the "Calvine to Mack Road Auxiliary Lanes" project and the downturn of the economy. Likewise, the decrease in Sutter County on SR 99 may be attributed to the downturn of the economy. The results are as follows:

Route	County	2010	2011
I-5	YOL	214,344	240,054
	SAC	1,060,060	1,131,991
SR 99	SAC	2,012,401	1,710,595
	SUT	151,856	29,960

- **Top Congested Freeways:** Based on the VHD of all State Highway urban corridors, the congestion comparison of I-5 and SR 99 for 2010 and 2011 were ranked with the other corridors. As identified below, SR 99 and I-5 in Sacramento Counties have the distinction of being the top congested freeways in the District 3.

Route	County	2010 Rank	2011Rank
I-5	SAC	3	2
	YOL	10	9
SR 99	SAC	1	1
	SUT	11	15

- **Top Bottleneck Locations:** The bottleneck comparisons of I-5 and SR 99 for 2010 and 2011 by locations and rankings listed below can change from year to year, and may be indicative of temporary bottlenecks (i.e. short-term construction activities or special events) rather than major geometric constraints that require major operational strategies or capital expansion. Rankings are in comparison to all state highways in the greater Sacramento area of District 3 during both the AM peak and PM peak time periods. SR 99 has the number one and two bottleneck locations during the AM peak time period and number two locations during the PM peak time period.

I-5:

County	Approx. Location	AM/PM, Direction	2010 Av. Daily VHD	2011 Av. Daily VHD	2010 Av. Duration (min)	2011 Av. Duration (min)	2010 Rank	2011 Rank
SAC	WB Pocket Rd.	AM, NB	167	31	82	26	4	9
	Vallejo	PM, SB	143	100	70	15	8	17
	Fruitridge Rd.	PM, SB	---	79	--	70	--	19
	P St.	PM, SB	---	49	--	30	--	28

SR 99:

SAC	Tangerine Av.	PM, SB	594	299	340	92	2	2
	Pomegranate Av.	PM, SB	---	231	50	42	--	5
	Oranage Av.	PM, SB	---	166	97	62	5	6
	EB Consumnes River	PM, SB	---	144	87	313	3	8
	Tumbridge Dr.	PM, SB	200	39	50	8	7	--
	12th Av.	AM, NB	185	65	81	28	4	--
	8th Av. POC	AM, NB	---	98	--	51	--	1
	WB 47th Av.	AM, NB	155	90	60	54	6	2
	WB Calvine Rd.	AM, NB	---	62	--	37	--	4
	WB Florin Rd.	AM, NB	---	51	--	31	--	6
	Broadway	AM, SB	---	97	74	57	2	15

Transit and Bicycle Performance Measures:

Beginning with the 2011 SOTC Report, it was determined that the implementation of the infrastructure needs for transit and bicycles would be used as the performance measures for each. Although this is an "output" and not an "outcome" measure, it is considered the best indicator of increasing the contribution of each mode to corridor mobility at this preliminary stage of system management and reporting. The 2011 Report established the baseline by listing transit and bicycle system infrastructure needs and each SOTC Report reports on implementation progress. Projects selected as infrastructure needs connect to or are on the managed system network identified in the original 2009 CSMP and are included in Tables 1and 2.
The sources used for the identification of improvement needs were the *2035 SACOG Metropolitan Transportation Plan*, the *Sacramento Regional Transit (SacRT) District 10-Year Capital Improvement Plan* and *5-Year Capital Improvement Plan Master List* of all Projects 2010-15, the *SacRT Action Plan*, the *2011 SacRT Short Range Transit Plan*, the *SACOG 2011 Regional Bicycle, Pedestrian, and Trails Master Plan*, *2011 Sacramento County Bicycle Master Plan*, the *2010 Sacramento City/County Bikeway Master Plan*, the *City of Galt 2011 Bicycle Master Plan*, the *City of Elk Grove 2007 Trails Master Plan* and *2004 Bicycle and Pedestrian Master Plan*, the *City of Yuba City 2011 Master Bicycle Plan*, and the draft *2012 Sutter County Bike Plan*.

Table 1: CSMP Transit System Needs Update

Transit Operator	Project Description	Total Cost Estimate (1,000s)	Implementation Status
VAR	Sacramento Valley Intermodal Station - Develop terminal for heavy rail, light rail and bus service. Realign existing mainline passenger and freight rail lines, and platforms; extend surrounding streets; and modify I St. I-5 on-ramps	$543,743	2035 SACOG MTP phased complete by 2035
SacRT	Green Line Phase 1- Extend single track rail from Downtown Sacramento to Richards Bl.	$43,882	2035 SACOG MTP, anticipate completion by Summer 2012
SacRT	Green Line MOS2 and MOS3 – Extend light rail from Richards Bl. to Natomas Town Center and from Natomas Town Center to the Sacramento International Airport	$698,287	2035 SACOG MTP complete by 2035. Request for funding to work on draft EIS/EIR will be released early 2013, Consultant on board by Spring of 2013, Draft EIS/EIR release by fall of 2014
SacRT	Blue Line Phase 2 - Extend South Sacramento light rail from Meadowview Station to Consumnes River College	$270,000	2035 SACOG MTP complete by 2020. Waiting on funds grant agreement, possibly by end of 2012 thru FTA which will allow construction of full project. Some early construction activities that are environmentally sensitive are currently underway

Table 2: CSMP Bicycle System Needs Update

County	Project Description	Total Cost Estimate (1,000s)	Implementation Status
SUT	Construct Class II bicycle lanes on George Washington Blvd., from Lincoln Rd. to Franklin Rd.	$552	2011 SACOG Regional Bicycle & Pedestrian Master Plan. This project is no longer viable.
SUT	Construct roadway bicycle facilities & on-street improvements, Garden Hwy. from Franklin Av. to 2nd St.	$1,100	Completed in 2009

Moving Forward:

Implementation of 2009 SR 99 and I-5 CSMP Strategies:

During the development of the 2009 CSMP a number of strategies were identified to assist in the effort to enhance corridor mobility. The following strategies listed in Table 3 are a subset of the original strategies that were implemented from July 1, 2011 through December 31, 2011. The implementation actions do not represent the final enactments of individual strategies, but are part of the ongoing long-term implementation progress.

Table 3: SR-99 and I-5 CSMP Strategies

Strategy	Description	Implementation Actions	Implementation Challenges
Construct planned and programmed key capital projects along the State Highway System and parallel roadways that serve to reduce congestions along SR 99 and I-5.	Implementation of the capital improvements identified in the 2009 CSMP Key Programmed and Planned Project lists and approved in the regional transportation plans for all transportation modes within the scope, schedule, and cost specified.	The SR 99, Calvine Road to Mack Road Auxiliary Lane project was completed and opened to the public in late 201l.	Funding availability, funding competition within the region
Comprehensive daily monitoring of the status of all modes providing service on the CSMP transportation network.	Full deployment of multimodal transportation service status detection systems for all CSMP network components.	Close coordination between Planning & Traffic Operations to identify detection need locations. Incorporated into 3-Year PID Program, TSDP, and seeking funding opportunities.	Funding availability, funding competition within region.
Continually monitor and analyze the CSMP transportation network to improve system performance.	Monitor transportation performance measures and make system modifications, as appropriate, on a frequent and timely basis.	Annual State of the Corridor Reports	Staff resources and data availability.
Complete Bus/Carpool lane network.	Complete the regional bus/carpool lane network, including freeway-to-freeway HOV lane connectors.	Continued project development activities on Bus/Carpool lane projects.	Funding availability, funding competition within the region. Public agency and public acceptance of network.
Expand P&R lots at key locations	Add additional capacity to existing Park and Ride (P&R) lots at or approaching capacity near transit stations and other locations.	Construction started in December 2011 on the expansion of the SR 99/Bogue Rd. P&R lot from 88 to 150 spaces.	Funding availability, funding competition within the region, and available land.
Improve bike-pedestrian access in the CSMP transportation network.	Plan and program for construction of additional bicycle paths / lanes, and related improvements for access and connectivity to transit, park and ride lots, and destination points.	Updated the gap analysis for transit and bicycle projects	Funding availability, funding competition within the region.

Traffic Operational System (TOS) Improvements and Intelligent Transportation Systems (ITS) Plans and Studies:

The primary and highest priority method for Highway 99 and Interstate 5 corridor system management is the development, implementation, and use of system and operational management strategies to facilitate efficient and effective transportation network use. These strategies include TOS projects such as ramp metering, auxiliary lanes, transition lanes, bus/carpool (a.k.a. HOV) lanes, and short mixed flow lane extensions, and ITS projects such as Closed Circuit Television Systems, Changeable Message Signs, Blue Tooth Readers, Highway Advisory Radio, and Traffic Monitoring Stations. Plans and studies are utilized to identify needed TOS and ITS improvements. Several plans and studies underway are as follows:

District 3 ITS/Operational Improvement Plan: An improvement plan will be prepared that will identify and prioritize new TOS and ITS projects for urban highway corridors within District 3. TOS and ITS improvements utilize very low cost strategies that allow the system to operate at optimal performance without adding significant through-capacity. Currently, there are numerous individual TOS and ITS plans that were prepared by different District 3 Divisions, Caltrans Headquarters, and various local and regional agencies. The purpose of the Plan will be to provide a unified document that can be used by all District Divisions, and local and regional agencies for programming and deployment of projects identified in the Plan.

SR 99/I-5 to SR 70 Bus/carpool Lanes Feasibility Study: A feasibility study began in December 2011 to identify and analyze different congestion relief and mobility enhancement scenarios on SR 99 from the I-5/SR 99 Interchange in Sacramento County to the SR-70/99 Wye in Sutter County. Some of the projects that will be analyzed include HOV lanes, auxiliary lanes, mix flow lanes and ramp meters. Once a preferred scenario is selected, a phasing plan will be developed. Once the study is completed, the identified projects will be programmed based on the priority status and funding availability. The study is scheduled for completion by June 2013.

Project Initiation Documents (PID) Work Program for Corridor Projects: The District's System Planning process identifies a spectrum of projects to address deficiencies on the transportation system. The bridge between the identification of needed system improvements and the actual programming (funding) of these projects is the PID. The PID provides refined information regarding the specific scope, schedule, and cost of the proposed improvement, thereby providing critical information for decision makers and assuring the efficient delivery of capital improvement projects. The selection of PIDs for development and inclusion in the annual 3-Year PID Work Program is based on the prioritization of the project through the

System Planning process, a comprehensive dialogue with our local and regional partner agencies, and the likelihood of the project being programmed for at least project development work. Before a project can be programmed to receive funding for project development and construction, a PID must first be prepared. High priority projects included in the 2009 SR 99/I-5 CSMP as well as new projects that may be identified in aforementioned plans and studies are included in the 3-Year PID Work Program. TOS and ITS projects being considered for the inclusion into the Work Program are listed in Table 4.

Table 4: Proposed PID Work Program

Non-SHOPP (Lead Agency)	Project Description	Total Cost Estimate (1,000s)	Estimated PID Completion Year
Caltrans	I-5 From Pocket Road to Florin Road: Add auxiliary lane	$7,100	2013
Caltrans	SB I-5 from US 50 to Sutterville Road: SB transition lane	$3,600	2013
Caltrans	Install ramp meters and ITS elements at various locations including SR-99	TBD	2013
Caltrans	Preliminary Investigation to determine operational strategies and capital projects to reduce traffic congestion on SR 99 between the SR 70/SR 99 Wye and I-5	TBD	2013
SHOPP	**Project Description**	**Total Cost Estimate (1,000s)**	**Estimated PID Completion Year**
Caltrans	Detection Repair and Upgrade Communications at178 locations on Routes 5, 65, 80, 50, 51, 89, 99	$2,700	2013
Caltrans	CCTV Camera System Upgrade at 80 locations on Routes 5, 65, 80, 50, 51, 89, 99	$1,900	2013
Caltrans	HAR Upgrade at 25 locations on Routes 5, 65, 80, 50, 51, 89, 99	$1,500	2013
Caltrans	RWIS Upgrade at 18 locations on Routes 5, 65, 80, 50, 51, 89, 99	$1,500	2013
Caltrans	Upgrade CMS panels to LED at 40 locations on Routes 5, 65, 80, 50, 51, 89, 99	$2,600	2014
Caltrans	Upgrade existing communication lines on I-5 to fiber optics in Sacramento County from PM 16.1 to PM 26.7	$2,800	2014

Micro-simulation Modeling:

Since the beginning of the development of the CSMPs, Caltrans has been developing micro-simulation traffic models for several CSMP corridors, including the SR 99/I-5 corridor. These CSMP models include a calibrated 2006 base model, a future 2020 No Build model, and several 2020 scenario models that evaluate the traffic impacts of programmed, planned, and key CSMP projects. The models will also allow Caltrans to evaluate project sequencing and prioritization strategies.